

Institutionen för pedagogik, kommunikation och lärande

Formulating knowledge

Engaging with issues of sustainable development
through academic writing in engineering education

av

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Abstract

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Given that knowledge in society is increasingly shaped by textuality and dependent on texts, higher education holds a special responsibility for introducing and guiding students into text practices contingent on disciplinary fields and their knowledge traditions. On a general level, this doctoral thesis investigates how participation in such text practices at university functions as a means for engaging students with knowledge that is new to them. Two aims have been pursued across three empirical studies in the setting of supervision of an academic writing assignment in engineering education. First, the thesis aims at illuminating challenges involved as students and teachers are engaging with knowledge through text practices. Second, the thesis aims at making visible what communicative work such challenges entail.

The empirical material comprises video recorded supervision sessions where sequential drafts of an academic writing assignment on issues of sustainable development are being discussed. Given the sociocultural and dialogical perspective this thesis is grounded in, text production is understood as a mediating activity and a process of gradual appropriation of disciplinary practices. Methodologically, such premises imply a detailed investigation of text production as practical work, empirically analysed as interactional, communicative processes and from the participants' perspective.

The studies have provided insights into three salient challenges in this type of text production. Study 1 addresses the problem of how supervision provides a site for taking initial steps into a disciplinary field and its knowledge traditions. Study 2 focuses on referencing as a contextualizing and recontextualizing practice where knowledge of a field needs to be transformed for new purposes. Study 3 addresses challenges involved in grounding conclusions in alignment with a particular knowledge field.

The analyses show that formulating knowledge is a demanding process for both students and teachers. Writing a report on issues of sustainable development exemplify advanced practices that do not lend themselves to easy explanations and straightforward instruction. Talking and discussing specific matters about specific issues, testing alternative ways of formulating the texts and alternative solutions to specific textual problems seem to have the potential of guiding students into dialogue with a field. Based on the conclusion that this type of orientation seems to require time and recurrent encounters, where gradually more concrete aspects of epistemic practices can be unfolded and experienced, it is argued that an orientation of this kind may be difficult to take on one's own - especially for someone in the role of a student.